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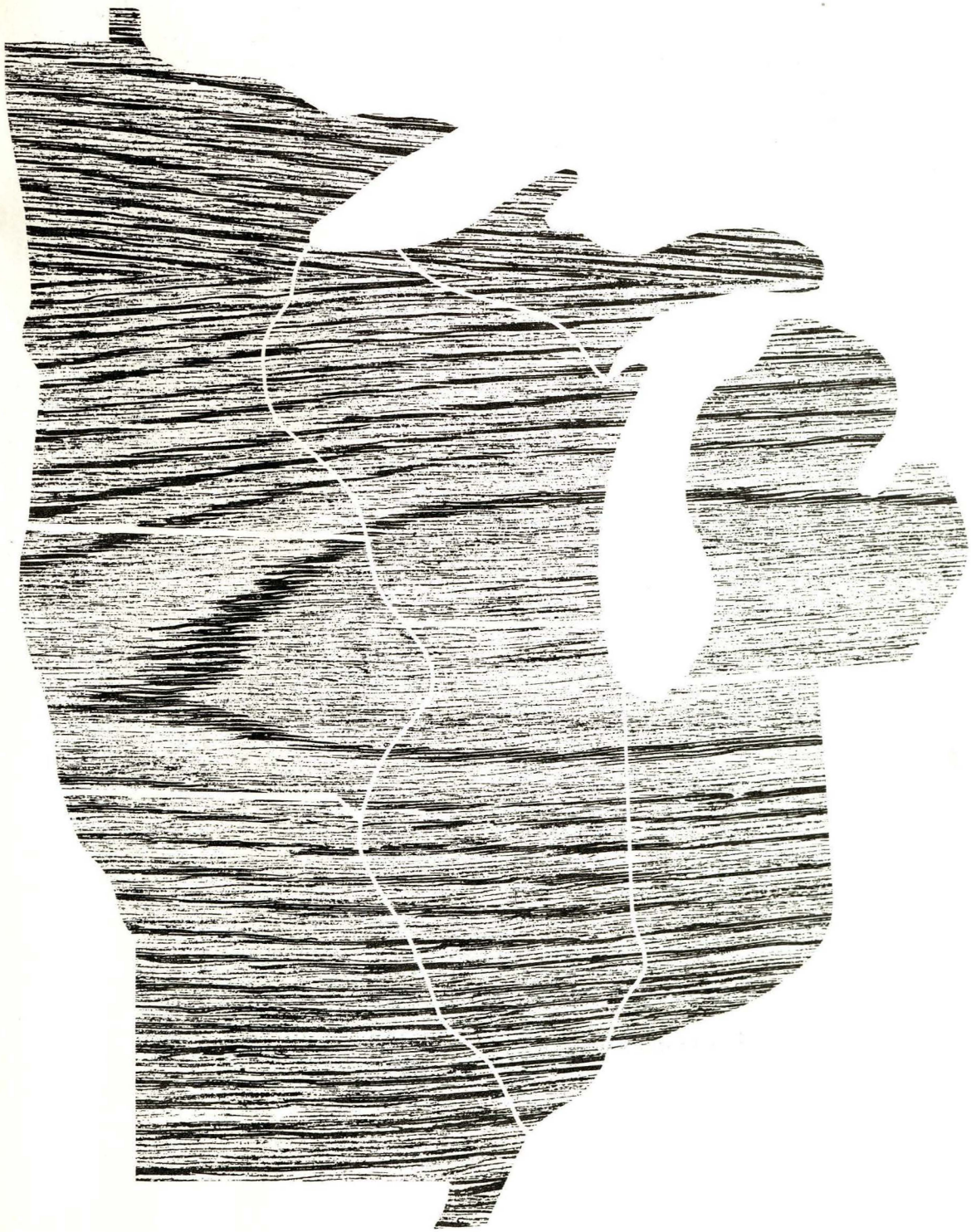
Veneer Industry and Timber Use, North Central Region, 1980

James E. Blyth and W. Brad Smith



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VENEER INDUSTRY AND TIMBER USE, NORTH CENTRAL REGION, 1980

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HIGHLIGHTS

Lake States

- In the Lake States veneer log production in 1980 was 64.1 million board feet, down 8 percent from 1976 when the last veneer industry study was made. Major production declines since 1976 were in elm, aspen, and hard maple. Log exports to other States and Canada climbed to a record 7.5 million board feet.
- Twenty-eight Lake States veneer mills received 58.7 million board feet of logs, off 11 percent from 1976. Imports were the lowest in 35 years and have been declining since 1966.
- More than 99 percent of the wood and bark residue generated at mills in 1980 was used.

Central States

- Central States loggers harvested 21.8 million board feet of veneer logs in 1980, off 20 percent from 1976. White oak was the leading species cut—in 1980 the volume harvested was 5 times more than that in 1970.
- Compared to 1976, veneer log receipts at 22 mills fell 9 percent to 32.9 million board feet. Imports of 14.1 million board feet came from 17 other States.
- Disposal of wood and bark residue at mills has not been a problem since 1974. Industrial fuel was the leading use for this residue.

This report of 1980 veneer log production and receipts in the North Central Region is a continuation of a series begun more than 24 years ago. On a total volume basis, veneer logs are the third most valuable industrial roundwood product harvested, outranked only by pulpwood and saw logs. The last veneer industry study was in 1976.

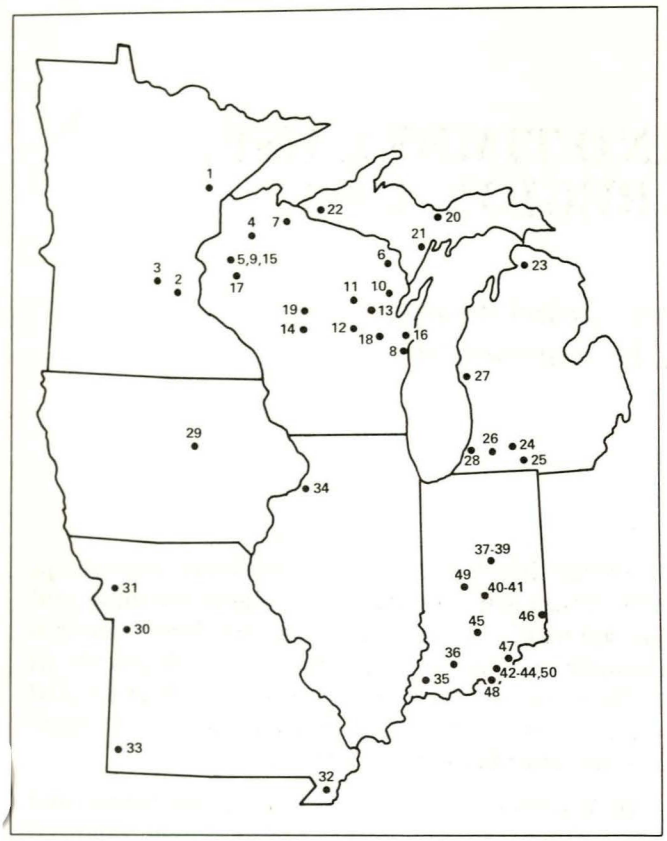
Current detailed veneer log production[1] and receipt information is necessary for intelligent planning and decision making in wood procurement, forest resource management, and forest industry development. In addition, researchers need veneer log harvest and receipt information for planning projects and analyzing and appraising the veneer industry.

All known veneer mills in the United States and Canada using North Central States timber reported their veneer log receipts in 1980 by species groups and State of origin. For the wood and bark residue they generated in 1980, they reported (in percent) the disposal of coarse wood residue (chippable), fine wood residue, and bark in six disposal categories. Their cooperation is gratefully acknowledged. Data were collected, using a formal questionnaire, in a cooperative effort by this Station; the Northeastern Forest Experiment Station; the Southern Forest Experiment Station; and the State forestry agencies in Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, and Wisconsin. Data are not shown for logs exported to countries other than Canada.

All board feet data in this report have been converted to International ¼-inch scale by applying a multiplier of 1.14 to all log volumes reported by veneer mills in Doyle scale and applying a multiplier of 1.04 to all log volumes reported by mills in Scribner Dec. C Scale. To convert to Doyle log scale, multiply the International scale volume by 0.8772. To convert to Scribner Dec. C. log scale, multiply the International scale volume by 0.9615.

This report presents the results of the survey, analyzes and interprets the data where appropriate,

[1]*Production is the volume of veneer logs cut from a specific area; receipts are the volume of veneer logs received by mills in a specific area regardless of geographic source.*



MINNESOTA		
Number	Name of mill	Location
1	Diamond International Co.	Cloquet
2	Allen Wood Products, Inc.	Hopkins
3	Elk River Box Company	Elk River
WISCONSIN		
4	Birchwood Lumber & Veneer Co.	Birchwood
5	Birchwood Mfg. Co.	Rice Lake
6	Louisiana-Pacific Corp.	Goodman
7	Louisiana-Pacific Corp.	Mellen
8	Eggers Plywood Co.	Two Rivers
9	Brunette Ind. Wood Prod.	Rice Lake
10	Linwood, Inc.	Gillett
11	Wisconsin Timber & Land Co.	Matoon

WISCONSIN		
Number	Name of mill	Location
12	Marion Plywood Corp.	Marion
13	Weber Veneer & Plywood Co.	Shawano
14	Weyerhaeuser Co.	Marshfield
15	Brunette Box & Veneer	Rice Lake
16	Dufeck Mfg. Co.	Denmark
17	Ebner Box Factory	Cameron
18	Seymour Woodenware Co.	Seymour
19	Standard Container Co.	Edgar
MICHIGAN		
20	Cliffs Forest Products Co.	Munsing
21	Anthony & Co.	Escanaba
22	Iron Wood Products	Bessemer
23	Manthei Bros.	Petosky
24	A. C. Hensel Mfg. Co.	Augusta
25	Worldwide Veneer Co.	Coldwater
26	Fruit Growers Package Co.	Paw Paw
27	Michigan Crate & Basket	Shelby
28	Riverside Package Co.	Riverside
IOWA		
29	R. S. Bacon Veneer Co.	Grundy Center
MISSOURI		
30	Vario Veneer Corp.	Pleasant Hill
31	Missouri Valley Walnut Co.	St. Joseph
32	Tipton Box Co.	Caruthersville
33	Crumbliss Wood Products	Neosho
ILLINOIS		
34	Swords Veneer & Lumber Co.	Rock Island
INDIANA		
35	Evansville Veneer Co.	Evansville
36	Jasper Veneer Mills	Jasper
37	Central Veneer Co., Inc.	Indianapolis
38	Curry Miller Veneers, Inc.	Indianapolis
39	Indiana Veneers, Inc.	Indianapolis
40	David R. Webb Co.	Edinburg
41	Amos Hill Veneer Co.	Edinburg
42	B. L. Curry & Sons	New Albany
43	Chester B. Stem, Inc.	New Albany
44	Adams Custom Veneer Co.	New Albany
45	National Veneer & Lumber Co.	Seymour
46	Pierson-Holowell Co., Inc.	Lawrenceburg
47	Roberts & Strack Veneer Co.	Clarksville
48	Norstram Veneers	Mauckport
49	Theising Veneer Co., Inc.	Mooresville
50	New Albany Box & Basket Co., Inc.	New Albany

Figure 1.—*Location of active veneer mills in the North Central Region, 1980.*

compares the results with 1976 or earlier years, and discusses trends in veneer log production and use. After a brief national overview, the report is divided into two sections—Lake States (Michigan, Minnesota, and Wisconsin) and Central States (Illinois, Indiana, Iowa, and Missouri)—because different species are grown and used as veneer logs in each area.

Fifty veneer mills operated in the region in 1980, six less than in 1976 (fig. 1). Between 1976 and 1980, eight mills closed, another burned and is being rebuilt, and three new mills opened. Net losses included one in Minnesota (being rebuilt), two in Wisconsin, one in Iowa, one in Illinois, and one in Indiana.

NATIONAL OVERVIEW

National hardwood plywood production in 1980 fell 9.6 percent below 1979 and 10.3 percent below 1976 to 1,312.1 million square feet[2] surface measure. Principal face ply species were birch and oak.

Housing starts plunged 25 percent in 1980 to 1,328,000[3] . This decline in home construction led to

[2]*Source: U.S. Department of Commerce, Bureau of the Census. Current Industrial Report Series MA-24F.*

[3]*Source: F.W. Dodge Division of McGraw-Hill Information Systems.*

lower consumption of hardwood plywood for interior walls, kitchen and vanity cabinets, flush doors, flooring, and furniture.

The prefinished hardwood plywood industry felt the brunt of the economic downturn resulting from tight money and high interest rates. The laminated hardwood flooring industry had to compete with imported hardwood flooring, particularly in architectural and fancy type floors.

One bright spot was the 15 percent sales increase in the distribution segment of the panel market. The distribution segment supplies the booming do-it-yourself market and the steadily increasing home remodeling and additions market served by contractors.

LAKE STATES

Production

Lake States loggers cut 64.1 million board feet of veneer logs in 1980, off 5.5 million board feet from 1976. Demand for veneer fell in the housing, furniture, and container markets, which are widely served by Lake States veneer mills. Two-thirds of the volume was supplied by three species:

Species	Million board feet
Aspen	20.2
Hard maple	12.8
Red oak	10.7

Major production declines since 1976 were in elm (3.4 million board feet), aspen (1.6 million board feet), and hard maple (1.3 million board feet). Elm production dropped to the lowest level recorded in the last 35 years because much of the Lake States elm resource has been lost to Dutch Elm disease. Demand for white oak rose sharply from only 700,000 board feet in 1976 to 3,600,000 board feet in 1980. White oak veneer logs were first produced in the Lake States in 1966.

Log exports climbed to a record 7.5 million board feet. By volume, primary export markets were:

Destination	Million board feet
Canada	4.3
Indiana	2.1
Ohio	0.7

Michigan accounted for more than half of the harvest at 36.8 million board feet, a gain of 10 percent over 1976. Aspen and hard maple dominated the Michigan harvest. Two-fifths of the volume was destined for out-of-State markets. Major species shipped from Michigan were hard maple, red oak, and white oak.

Wisconsin's harvest of 20.9 million board feet was more than half red oak and aspen with 25 percent of the harvest exported to Michigan. Compared to 1976, aspen output dropped 43 percent, elm fell 51 percent, and hard maple declined 40 percent.

The two primary species cut in Minnesota were aspen (3.5 million board feet) and red oak (1.4 million board feet), accounting for 76 percent of the total Minnesota cut (6.5 million board feet).

Mill Receipts

Lake States veneer mills received 58.7 million board feet of logs in 1980, down 7.6 million board feet from 1976. Declines in receipts were concentrated in elm, red oak, and aspen. Imports were the lowest in 35 years, although log receipts from Canada were about the same as in 1976. Imports have been declining since 1966.

Michigan's nine veneer mills procured 27.3 million board feet of logs, a drop of 5 percent from 1976. Demand continued to be highest for aspen. Michigan imported wood only from Wisconsin.

Wisconsin's mills imported 47 percent of their receipts from contiguous States.

Mill Residue[4]

More than 99 percent of the mill residue generated in each class (coarse, fine, and bark) during 1980 was used, a marked improvement over the 66 percent of fines and 72 percent of bark used in 1976. Nine out of 10 tons of fine residue were burned for industrial fuel as well as 95 out of 100 tons of bark. Coarse residue was used chiefly for industrial fuel and fiber products (pulp manufacturing).

Industry Outlook

Hardwood plywood production will improve from recessionary lows with increasing housing starts. However, the gains will be limited by competition from waferboard and oriented strand board (OSB). These boards are good plywood substitutes. They may make inroads for such uses as toys, doll houses, outdoor furniture, storage carts, bookcases, and bedboards. Several Lake States waferboard and OSB plants have opened since 1980.

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[4]*Mill residue generated at veneer mills is classed as: (1) bark; (2) coarse (wood)—suitable for chipping, such as veneer cores; or (3) fine (wood)—not suitable for chipping such as veneer clippings.*

Since 1970, the trend has been toward more veneer log exports from the Lake States to Canada and other States and fewer veneer log imports into the Lake States. This trend is likely to continue as the hardwood growing stock resource continues to expand in the Lake States. Demand for veneer in containers will probably continue to fall.

CENTRAL STATES

Production

Central States loggers cut 21.8 million board feet of veneer logs in 1980, down 20 percent from 1976 and down 45 percent from the peak production recorded in 1960. Principal species cut were:

Species
White oak
Walnut
Red oak
Cottonwood

White oak production increased in 1980 to 5 times the 1970 level. Walnut output declined nearly one-half from 1972. During the 1970's demand for oak veneer in furniture climbed while demand for walnut veneer in furniture fell. Cottonwood log production (used in containers) peaked in 1960 and has declined irregularly since then.

Major harvest changes between 1976 and 1980 were:

Species	Thousand board feet
Walnut	-2,450
White oak	+891
Cottonwood	-738
Soft maple	-649

Exports plunged 52 percent lower from 1976 to 3.0 million board feet; primary purchasers were in Wisconsin (52 percent), Ohio (27 percent), and Kentucky (17 percent).

Indiana furnished 49 percent of the Central States veneer log harvest and used 85 percent of its production. Each of the other States cut between 3.2 and 4.0 million board feet. Missouri was the only Central State to increase log output between 1976 and 1980. The major portion of cottonwood production shifted from Illinois in 1976 to Missouri in 1980.

Mill Receipts

Twenty-two Central States veneer mills received 32.9 million board feet of veneer logs in 1980, the lowest volume since 1970. Seventeen States, from all areas except the far West, shipped 14.1 million board feet of logs to the Central States. Kentucky, Ohio, Michigan, Oklahoma, and Pennsylvania each supplied more than 1 million board feet. Major imports included white oak from Kentucky and Ohio, red oak from Michigan, pecan from Oklahoma, and black cherry from Pennsylvania. Other States furnishing veneer logs were Alabama, Arkansas, North Carolina, Mississippi, Kansas, Nebraska, Wisconsin, Minnesota, Tennessee, Texas, Louisiana, and West Virginia.

More than four-fifths (83 percent) of the Central States total log receipts in 1980 went to Indiana's 16 veneer mills, including more than 90 percent each of the black cherry, hard maple, pecan, red oak, and yellow-poplar.

Plant Residue

Disposal of wood and bark residue has not been a problem since 1974. All of the coarse wood residue, 92 percent of the fine wood residue, and 94 percent of the bark was used in 1980. Industrial fuel was the leading use for each residue category; other uses were in pulp manufacturing, mulch, livestock bedding, and domestic (household) fuel.

Industry Outlook

Higher demand for new housing should lead to greater veneer log production in the Central States to provide veneer for furniture, paneling, kitchen cabinets, etc. However increased competition from waferboard and oriented strand board is likely to dampen the recovery for hardwood plywood markets.

Container veneer markets will probably continue to weaken due to heavy competition from plastics and other substitute materials.

Table 1.--Production and imports of veneer logs, Lake States, 1980

(In thousand board feet)[1/]

Species and destination	Total receipts[3/]	Production by States[2/]				Imports		
		Michigan	Minnesota	Wisconsin	Regional total	Other U.S.	Canada	Total imports
Pine								
Minnesota-Wisconsin	240	52	--	188	240	--	--	--
Total	240	52	--	188	240	--	--	--
Ash								
Michigan	329	329	--	--	329	--	--	--
Minnesota-Wisconsin	476	52	52	287	391	85	--	85
Exported[4/]	--	111	--	--	111	--	--	--
Total	805	492	52	287	831	85	--	85
Aspen								
Michigan	15,746	10,546	--	5,200	15,746	--	--	--
Minnesota-Wisconsin	4,212	250	3,411	551	4,212	--	--	--
Exported[4/]	--	203	84	--	287	--	--	--
Total	19,958	10,999	3,495	5,751	20,245	--	--	--
Basswood								
Michigan	257	257	--	--	257	--	--	--
Minnesota-Wisconsin	1,843	124	190	1,445	1,759	84	--	84
Exported[4/]	--	56	--	--	56	--	--	--
Total	2,100	437	190	1,445	2,072	84	--	84
Beech								
Michigan	854	854	--	--	854	--	--	--
Minnesota-Wisconsin	196	172	--	24	196	--	--	--
Exported[4/]	--	57	--	--	57	--	--	--
Total	1,050	1,083	--	24	1,107	--	--	--
Black cherry								
Michigan	59	59	--	--	59	--	--	--
Minnesota-Wisconsin	18	4	--	14	18	--	--	--
Exported[4/]	--	152	--	--	152	--	--	--
Total	77	215	--	14	229	--	--	--
Butternut								
Exported[4/]	--	--	--	5	5	--	--	--
Total	--	--	--	5	5	--	--	--
Cottonwood								
Michigan	475	475	--	--	475	--	--	--
Minnesota-Wisconsin	779	--	447	332	779	--	--	--
Exported[4/]	--	--	--	68	68	--	--	--
Total	1,254	475	447	400	1,322	--	--	--
Elm								
Minnesota-Wisconsin	2,130	292	175	1,653	2,120	10	--	10
Exported[4/]	--	26	438	739	1,203	--	--	--
Total	2,130	318	613	2,392	3,323	10	--	10
Hard maple								
Michigan	3,573	3,573	--	--	3,573	--	--	--
Minnesota-Wisconsin	8,368	6,393	30	1,942	8,365	3	--	3
Exported[4/]	--	733	--	85	818	--	--	--
Total	11,941	10,699	30	2,027	12,756	3	--	3

(Table 1 continued on next page

(Table 1 continued)

Species and destination	Total receipts[3]	Production by States[2]				Imports		
		Michigan	Minnesota	Wisconsin	Regional total	Other U.S.	Canada	Total imports
Paper birch								
Michigan	1,089	1,089	--	--	1,089	--	--	--
Minnesota-Wisconsin	387	104	56	175	335	--	52	52
Exported[4]	--	145	--	--	145	--	--	--
Total	1,476	1,338	56	175	1,569	--	52	52
Pecan								
Exported[4]	--	20	--	--	20	--	--	--
Total	--	20	--	--	20	--	--	--
Red oak								
Michigan	369	369	--	--	369	--	--	--
Minnesota-Wisconsin	9,380	468	1,450	5,930	7,848	1,324	208	1,532
Exported[4]	--	2,236	--	234	2,470	--	--	--
Total	9,749	3,073	1,450	6,164	10,687	1,324	208	1,532
Soft maple								
Michigan	306	306	--	--	306	--	--	--
Minnesota-Wisconsin	1,175	568	93	490	1,151	24	--	24
Total	1,481	874	93	490	1,457	24	--	24
Sycamore								
Exported[4]	--	23	--	--	23	--	--	--
Total	--	23	--	--	23	--	--	--
Walnut								
Michigan	114	114	--	--	114	--	--	--
Exported[4]	--	144	11	59	214	--	--	--
Total	114	258	11	59	328	--	--	--
White oak								
Michigan	1,638	1,638	--	--	1,638	--	--	--
Minnesota-Wisconsin	315	--	52	206	258	57	--	57
Exported[4]	--	1,739	2	10	1,751	--	--	--
Total	1,953	3,377	54	216	3,647	57	--	57
Yellow birch								
Michigan	2,478	2,478	--	--	2,478	--	--	--
Minnesota-Wisconsin	1,930	550	26	1,094	1,670	--	260	260
Exported[4]	--	--	--	3	3	--	--	--
Total	4,408	3,028	26	1,097	4,151	--	260	260
Other hardwoods								
Exported[4]	--	--	--	129	129	--	--	--
Total	--	--	--	129	129	--	--	--
All species								
Michigan	27,287	22,087	--	5,200	27,287	--	--	--
Minnesota-Wisconsin	31,449	9,029	5,982	14,331	29,342	1,587	520	2,107
Exported[4]	--	5,645	535	1,332	7,512	--	--	--
Total	58,736	36,761	6,517	20,863	64,141	1,587	520	2,107

[1] International 1/4-inch rule.

[2] Vertical columns of figures under box heading "Production by States" present the amount of veneer logs cut in each State.

[3] Production minus exports plus imports.

[4] Veneer logs shipped to States outside the Lake States and to Canada.

Table 2.--Veneer log production and receipts in the Lake States by species, 1976 and 1980

(In thousand board feet)[1/]

Species	Production			Receipts		
	1976	1980	Change	1976	1980	Change
Pine	402	240	-162	402	240	-162
Ash	965	831	-134	942	805	-137
Aspen	21,828	20,245	-1,583	21,460	19,958	-1,502
Basswood	2,069	2,072	3	2,254	2,100	-154
Beech	1,171	1,107	-64	994	1,050	56
Black cherry	245	229	-16	190	77	-113
Cottonwood	1,434	1,322	-112	1,434	1,254	-180
Elm	6,701	3,323	-3,378	6,344	2,130	-4,214
Hard maple	14,018	12,756	-1,262	12,390	11,941	-449
Paper birch	1,236	1,569	333	1,309	1,476	167
Red oak	11,836	10,687	-1,149	12,055	9,749	-2,306
Soft maple	1,049	1,457	408	1,359	1,481	122
Walnut	709	328	-381	0	114	114
White oak	707	3,647	2,940	98	1,953	1,855
Yellow birch	4,474	4,151	-323	4,614	4,408	-206
Other hardwoods	773	177	-596	463	0	-463
All species	69,617	64,141	-5,476	66,308	58,736	-7,572

[1/] International 1/4-inch rule.

Table 3.--Veneer log production by species group for selected years, Lake States, 1946-1980

(In million board feet)[1/]

Year	All species	Species group													
		Ash	Aspen	Bass-wood	Beech	Yellow birch	Cotton-wood	Elm	Hard maple	Soft maple	Red oak	White oak	Paper birch	Walnut	Other species
1946	110.6	2.3	4.0	10.4	5.6	[2/]26.8	0.4	16.6	[3/]40.3	--	[4/]3.1	--	--	--	1.1
1952	78.2	--	1.4	10.4	3.1	[2/]18.2	--	11.5	[3/]23.8	--	[4/]5.1	--	--	--	[5/]4.7
1954	72.0	.8	.3	9.2	3.2	[2/]17.3	2.7	10.5	[3/]20.9	--	[4/]5.5	--	--	--	1.6
1956	79.0	.7	.8	10.3	5.7	[2/]20.3	2.1	9.6	20.1	3.7	[4/]4.5	--	--	0.3	.9
1958	52.7	.6	1.7	7.1	1.8	[2/]13.1	2.2	8.9	9.7	2.2	[4/]4.8	--	--	.2	.4
1960	54.0	1.0	2.1	6.2	1.0	[2/]14.1	1.9	5.1	10.9	2.9	[4/]7.6	--	--	.6	.6
1963	50.5	.6	1.5	6.6	.3	[2/]10.9	.4	5.7	10.5	2.2	[4/]8.9	--	--	2.3	.6
1965	51.7	.7	.6	6.0	.5	[2/]11.3	1.4	6.3	11.8	1.8	[4/]9.0	--	--	.9	1.4
1966	50.9	1.1	.7	4.5	.5	[2/] 9.5	1.4	5.7	13.1	1.5	9.1	0.3	--	1.5	2.0
1968	45.5	1.0	.6	3.6	.5	8.3	1.4	5.4	9.4	1.2	8.2	.5	1.9	1.7	1.8
1970	34.4	.4	1.3	3.2	.3	4.4	1.3	3.8	8.8	.8	6.8	.3	1.2	.6	1.2
1972	42.2	.6	2.6	2.9	1.1	5.2	1.3	5.1	9.2	1.0	9.7	.3	1.2	1.4	.6
1974	68.7	.9	24.2	2.4	.7	4.2	1.8	6.1	11.7	2.0	11.1	.6	1.3	1.0	.7
1976	69.6	1.0	21.8	2.1	1.2	4.5	1.4	6.7	14.0	1.1	11.8	.7	1.2	.7	1.4
1980	64.1	0.8	20.2	2.1	1.1	4.2	1.3	3.3	12.8	1.5	10.7	3.6	1.6	.3	.6

[1/] International 1/4-inch rule.

[2/] Includes paper birch.

[3/] Includes soft maple.

[4/] Includes white oak.

[5/] Includes ash and cottonwood.

Table 4.--Lake States veneer log production, receipts, exports and imports for selected years, 1946-1980

(In million board feet)[1/]

Year	Produced in the Lake States and received at Lake States mills	Exported[2/]	Imported[3/]	Total production in Lake States	Total receipts in Lake States
1946	109.7	0.9	5.9	110.6	115.6
1948	116.0	.8	12.0	116.8	128.0
1950	86.0	.6	15.7	86.6	101.7
1952	77.8	.4	12.1	78.2	89.9
1954	71.6	.4	12.1	72.0	83.7
1956	78.7	.3	13.4	79.0	92.1
1958	51.5	1.2	6.0	52.7	57.5
1960	51.9	2.1	12.5	54.0	64.4
1963	45.0	5.5	7.7	50.5	52.7
1965	49.0	2.7	7.6	51.7	56.6
1966	45.8	5.1	9.6	50.9	55.4
1968	39.7	5.8	7.9	45.5	47.6
1970	31.4	3.0	5.6	34.4	37.0
1972	37.7	4.5	4.6	42.2	42.3
1974	63.4	5.3	4.1	68.7	67.5
1976	63.3	6.3	3.0	69.6	66.3
1980	56.6	7.5	2.1	64.1	58.7

[1/] International 1/4-inch rule.

[2/] From Lake States to other States and Canada

[3/] From other States and Canada into Lake States.

Table 5.--Veneer log receipts in the Lake States by species group for selected years, 1952-1980

(In million board feet)[1/]

Year	All species	Species group												
		Ash	Aspen	Bass-wood	Beech	Yellow birch	Cotton-wood	Elm	Hard maple	Soft maple	Red oak	White oak	Paper birch	Other species
1952	89.9	--	1.4	10.9	3.2	[2/]27.1	--	11.7	[3/]24.9	--	[4/]5.3	--	--	[5/]5.4
1954	83.7	0.8	.3	10.3	3.2	[2/]25.0	2.7	10.9	[3/]22.4	--	[4/]6.5	--	--	1.6
1956	92.1	.7	.8	10.6	5.7	[2/]28.5	3.0	10.2	21.9	4.7	[4/]5.0	--	--	1.0
1958	57.5	.6	1.7	7.3	1.8	[2/]17.2	2.2	9.2	9.6	2.5	[4/]5.0	--	--	.4
1960	64.4	1.1	2.1	6.8	.9	[2/]18.9	3.3	6.2	12.2	3.6	[4/]8.4	--	--	.9
1963	52.7	.7	1.6	6.7	.3	[2/]14.3	.7	4.9	11.1	2.6	[4/]9.3	--	--	.5
1965	56.6	.7	.6	6.3	.5	[2/]14.5	2.1	6.3	13.2	1.9	[4/]9.3	--	--	1.2
1966	55.4	1.1	.7	4.8	.5	[2/]14.7	2.3	5.8	12.8	1.8	9.7	.2	--	1.0
1968	47.6	1.0	.6	3.9	.5	10.2	2.1	5.2	9.0	1.3	8.3	.2	4.0	1.3
1970	37.0	.3	1.3	3.6	.3	6.1	1.4	3.8	9.0	.9	7.7	.2	1.9	.5
1972	42.3	.6	2.4	3.1	.7	6.3	1.3	5.3	9.4	1.2	10.1	.2	1.5	.2
1974	67.5	.9	24.3	2.6	.5	4.6	1.8	5.7	11.9	2.3	11.1	.1	1.3	.4
1976	66.3	.9	21.5	2.2	1.0	4.6	1.4	6.3	12.4	1.4	12.1	.1	1.3	1.1
1980	58.7	.8	20.0	2.1	1.0	4.4	1.3	2.1	11.9	1.5	9.7	2.0	1.5	.4

[1/] International 1/4-inch rule.
[2/] Includes paper birch.
[3/] Includes soft maple.
[4/] Includes white oak.
[5/] Includes ash and cottonwood.

Table 6.--Percent of veneer log production and receipts by species group, Lake States, 1956 and 1980

(In percent)

Species group	Production		Receipts	
	1956	1980	1956	1980
Ash	0.9	1.3	0.8	1.4
Aspen	1.0	31.5	0.9	34.0
Basswood	13.0	3.3	11.5	3.6
Beech	7.2	1.7	6.2	1.7
Birch	25.7	9.1	30.9	10.0
Cottonwood	2.7	2.0	3.2	2.2
Elm	12.2	5.1	11.1	3.6
Hard maple	25.4	20.0	23.8	20.3
Soft maple	4.7	2.3	5.1	2.6
Oak	5.7	22.3	5.4	19.9
Other species	1.5	1.4	1.1	0.7
All species	100.0	100.0	100.0	100.0

Table 7.--Production and disposition of softwood and hardwood veneer mill residue by type of residue and use, Lake States, 1980

(In thousand tons green weight)

State and type of use	Wood residue						Bark	
	Total		Coarse[1/]		Fine[2/]			
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Wisconsin								
Fiber products	--	5.32	--	3.16	--	2.16	--	--
Industrial fuel	0.49	48.71	0.19	16.53	0.30	32.18	0.14	15.74
Domestic fuel	--	.08	--	.08	--	--	--	--
Miscellaneous[3/]	--	2.03	--	1.80	--	.23	--	.03
Not used[4/]	--	.02	--	.01	--	.01	--	.01
Total	.49	56.16	.19	21.58	.30	34.58	.14	15.78
Minnesota								
Industrial fuel	--	6.95	--	2.64	--	4.31	--	1.99
Domestic fuel	--	.11	--	.11	--	--	--	--
Miscellaneous[3/]	--	.07	--	.02	--	.05	--	--
Not used[4/]	--	.08	--	--	--	.08	--	.04
Total	--	7.21	--	2.77	--	4.44	--	2.03
Michigan								
Fiber products	--	12.17	--	12.17	--	--	--	--
Industrial fuel	--	35.15	--	5.61	--	29.54	--	14.05
Domestic fuel	--	3.85	--	2.94	--	.91	--	--
Miscellaneous[3/]	--	3.82	--	.15	--	3.67	--	1.49
Not used[4/]	--	.40	--	.40	--	--	--	--
Total	--	55.39	--	21.27	--	34.12	--	15.54
All Lake States								
Fiber products	--	17.49	--	15.33	--	2.16	--	--
Industrial fuel	.49	90.81	.19	24.78	.30	66.03	.14	31.78
Domestic fuel	--	4.04	--	3.13	--	.91	--	--
Miscellaneous[3/]	--	5.92	--	1.97	--	3.95	--	1.52
Not used[4/]	--	.50	--	.41	--	.09	--	.05
Total	.49	118.76	.19	45.62	.30	73.14	.14	33.35

[1/] Suitable for chipping, such as veneer cores.

[2/] Not suitable for chipping, such as veneer clippings.

[3/] Livestock bedding, mulch, small dimension, and specialty items.

[4/] Includes residue burned as waste.

Table 8.--Production and imports of veneer logs, Central States, 1980

(In thousand board feet)[1/]

Species and destination	Total receipts[3/]	Production by States[2/]					Imports		
		Illinois	Indiana	Iowa	Missouri	Regional total	Lake States	Other U.S.	Total imports
Pine									
Indiana	373	--	--	--	--	--	--	373	373
Total	373	--	--	--	--	--	--	373	373
Ash									
Indiana	500	113	280	--	--	393	8	99	107
Illinois-Iowa-Missouri	7	7	--	--	--	7	--	--	--
Exported[4/]	--	28	21	57	--	106	--	--	--
Total	507	148	301	57	--	506	8	99	107
Basswood									
Indiana	7	--	7	--	--	7	--	--	--
Exported[4/]	--	--	9	84	--	93	--	--	--
Total	7	--	16	84	--	100	--	--	--
Beech									
Exported[4/]	--	--	40	--	--	40	--	--	--
Total	--	--	40	--	--	40	--	--	--
Black cherry									
Indiana	968	--	20	--	--	20	49	899	948
Illinois-Iowa-Missouri	32	32	--	--	--	32	--	--	--
Exported[4/]	--	--	24	--	--	24	--	--	--
Total	1,000	32	44	--	--	76	49	899	948
Butternut									
Indiana	5	--	--	--	--	--	5	--	5
Total	5	--	--	--	--	--	5	--	5
Cottonwood									
Indiana	590	--	431	--	--	431	68	91	159
Illinois-Iowa-Missouri	1,072	--	--	--	1,072	1,072	--	--	--
Exported[4/]	--	--	--	23	--	23	--	--	--
Total	1,662	--	431	23	1,072	1,526	68	91	159
[illegible]m									
Indiana	313	1	33	--	--	34	261	18	279
Illinois-Iowa-Missouri	383	--	--	--	--	--	383	--	383
Exported[4/]	--	10	8	--	--	18	--	--	--
Total	696	11	41	--	--	52	644	18	662
Gum									
Indiana	254	9	226	--	--	235	--	19	19
Total	254	9	226	--	--	235	--	19	19
Hard maple									
Indiana	566	--	201	11	--	212	252	102	354
Illinois-Iowa-Missouri	49	--	--	--	--	--	49	--	49
Exported[4/]	--	--	34	3	--	37	--	--	--
Total	615	--	235	14	--	249	301	102	403
Pecan									
Indiana	3,401	115	337	--	94	546	11	2,844	2,855
Illinois-Iowa-Missouri	3	3	--	--	--	3	--	--	--
Exported[4/]	--	--	17	--	--	17	--	--	--
Total	3,404	118	354	--	94	566	11	2,844	2,855

(Table 8 continued on next pa

(Table 8 continued)

Species and destination	Total receipts[3]	Production by States[2]					Imports		
		Illinois	Indiana	Iowa	Missouri	Regional total	Lake States	Other U.S.	Total imports
Red oak									
Indiana	4,070	23	1,217	216	--	1,456	1,158	1,456	2,614
Illinois-Iowa-Missouri	290	128	--	162	--	290	--	--	--
Exported[4]	--	570	348	754	--	1,672	--	--	--
Total	4,360	721	1,565	1,132	--	3,418	1,158	1,456	2,614
Soft maple									
Indiana	238	34	168	--	--	202	--	36	36
Exported[4]	--	--	--	24	--	24	--	--	--
Total	238	34	168	24	--	226	--	36	36
Sycamore									
Indiana	236	--	145	--	--	145	--	91	91
Illinois-Iowa-Missouri	57	--	--	--	57	57	--	--	--
Exported[4]	--	--	68	--	--	68	--	--	--
Total	293	--	213	--	57	270	--	91	91
Walnut									
Indiana	3,861	908	1,024	562	555	3,049	125	687	812
Illinois-Iowa-Missouri	2,040	30	--	1,193	498	1,721	--	319	319
Exported[4]	--	68	205	38	23	334	--	--	--
Total	5,901	1,006	1,229	1,793	1,076	5,104	125	1,006	1,131
White oak									
Indiana	11,000	1,579	4,180	514	147	6,420	137	4,443	4,580
Illinois-Iowa-Missouri	1,583	253	391	103	827	1,574	--	9	9
Exported[4]	--	70	462	56	--	588	--	--	--
Total	12,583	1,902	5,033	673	974	8,582	137	4,452	4,589
Yellow poplar									
Indiana	957	--	825	--	--	825	--	132	132
Total	957	--	825	--	--	825	--	132	132
Other hardwoods									
Indiana	59	25	16	--	2	43	--	16	16
Illinois-Iowa-Missouri	1	1	--	--	--	1	--	--	--
Total	60	26	16	--	2	44	--	16	16
All species									
Indiana	27,398	2,807	9,110	1,303	798	14,018	2,074	11,306	13,380
Illinois-Iowa-Missouri	5,517	454	391	1,458	2,454	4,757	432	328	760
Exported[4]	--	746	1,236	1,039	23	3,044	--	--	--
Total	32,915	4,007	10,737	3,800	3,275	21,819	2,506	11,634	14,140

[1] International 1/4-inch rule

[2] Vertical columns of figures under box heading "Production by States" present the amount of veneer logs cut in each State.

[3] Production minus exports plus imports.

[4] Veneer logs shipped to States outside the Central States and to Canada.

Table 9.--Veneer log production and receipts in the Central States by species, 1976 and 1980

(In thousand board feet)[1/]

Species	Production			Receipts		
	1976	1980	Change	1976	1980	Change
Pine	--	--	--	263	373	110
Ash	979	506	-473	1,236	507	-729
Basswood	316	100	-216	43	7	-36
Black cherry	135	76	-59	660	1,000	340
Cottonwood	2,264	1,526	-738	2,584	1,662	-922
Elm	42	52	10	221	696	475
Gum	417	235	-182	432	254	-178
Hard maple	400	249	-151	1,364	615	-749
Pecan (hickory)	975	566	-409	4,293	3,404	-889
Red oak	3,797	3,418	-379	3,068	4,360	1,292
Soft maple	875	226	-649	560	238	-322
Sycamore	614	270	-344	651	293	-358
Walnut	7,554	5,104	-2,450	8,264	5,901	-2,363
White oak	7,691	8,582	891	10,821	12,583	1,762
Yellow-poplar	1,293	825	-468	1,393	957	-436
Other hardwoods	39	84	45	235	65	-170
All species	27,391	21,819	-5,572	36,088	32,915	-3,173

[1/] International 1/4-inch rule.

Table 10.--Veneer log production by species group for selected years, Central States, 1956-1980

(In million board feet)[1/]

Year	All species	Species group										
		Cotton-wood	Elm	Hard maple	Pecan (hickory)	Red oak	Soft maple	Syca-more	Walnut	White oak	Yellow-poplar	Other species
1956	33.1	8.0	0.9	0.8	0.1	1.1	1.8	0.6	10.6	3.4	1.6	4.2
1958	32.4	8.9	.6	1.1	.1	1.0	.5	.5	10.8	2.6	1.1	5.2
1960	39.9	11.2	2.0	1.2	.1	1.5	1.2	2.5	13.2	1.6	1.6	3.8
1963	38.0	7.4	.7	1.6	.8	.9	1.0	1.8	15.5	1.4	2.3	4.6
1966	36.7	6.2	[2/] .7	1.4	1.1	2.3	.5	1.0	14.7	1.9	3.0	3.9
1968	37.0	4.1	.7	1.3	3.0	2.1	.4	1.2	16.1	3.6	1.3	3.2
1970	23.5	4.8	.6	.8	1.5	1.3	.5	1.3	8.1	1.7	.8	2.1
1972	26.2	3.5	.5	1.1	2.4	1.7	.4	.7	10.0	3.3	1.2	1.4
1974	29.1	4.0	.7	1.1	1.2	2.9	.6	.9	8.5	5.2	1.2	2.8
1976	27.4	2.3	[3/]	.4	1.0	3.8	.9	.6	7.5	7.7	1.3	1.9
1980	21.8	1.5	.1	.2	.6	3.4	.2	.3	5.1	8.6	.8	1.0

[1/] International 1/4-inch rule.

[2/] Estimated.

[3/] Less than 50 thousand board feet.

Table 11.--Veneer log receipts by species group for selected years, Central States, 1956-1980

(In million board feet)[1/]

Year	All species	Species group: Cotton-wood	Elm	Hard maple	Pecan (hickory)	Red oak	Soft maple	Syca-more	Walnut	White oak	Yellow-poplar	Other species
1956	44.4	10.9	0.8	1.2	0.6	1.3	0.8	1.3	11.4	6.7	2.8	6.6
1958	41.6	10.2	.6	1.7	.3	1.3	.3	1.2	13.0	4.8	1.9	6.3
1960	50.2	10.4	1.0	2.9	.2	1.4	.5	2.3	17.1	3.6	2.8	8.0
1963	52.2	8.6	1.0	3.1	1.6	.9	.8	2.0	21.2	2.3	2.8	7.9
1966	48.2	6.7	[2/]1.0	3.6	1.6	2.0	.4	1.2	17.9	2.1	4.4	7.3
1968	48.8	5.7	1.0	2.7	4.9	2.3	.5	1.1	18.4	5.2	1.9	5.1
1970	28.0	4.7	.5	1.3	3.0	.8	.6	1.4	10.0	2.0	1.1	2.6
1972	35.1	4.9	.3	2.4	5.7	1.6	.5	.9	11.0	4.0	1.2	2.6
1974	39.7	5.6	.7	1.3	3.6	3.8	.7	1.0	10.1	7.7	1.3	3.9
1976	36.1	2.6	.2	1.4	4.3	3.1	.5	.6	8.3	10.8	1.4	2.9
1980	32.9	1.7	.7	.6	3.4	4.4	.2	.3	5.9	12.6	.9	2.2

[1/] International 1/4-inch rule.

[2/] Estimated.

Table 12.--Percent of veneer log production and receipts by species group, Central States, 1956 and 1980

(In percent)

Species group	Production 1956	Production 1980	Receipts 1956	Receipts 1980
Cottonwood	24.2	6.9	24.5	5.2
Elm	2.7	0.5	1.8	2.1
Hard maple	2.4	0.9	2.7	1.8
Pecan (hickory)	0.3	2.7	1.4	10.4
Red oak	3.3	15.6	2.9	13.4
Soft maple	5.5	0.9	1.8	0.6
Sycamore	1.8	1.4	2.9	0.9
Walnut	32.0	23.4	25.7	17.9
White oak	10.3	39.4	15.1	38.3
Yellow-poplar	4.8	3.7	6.3	2.7
Other species	12.7	4.6	14.9	6.7
All species	100.0	100.0	100.0	100.0

Table 13.--Production and disposition of softwood and hardwood veneer mill residue by type of residue and use, Central States, 1980

(In thousand tons green weight)

State and type of use	Wood residue						Bark	
	Total		Coarse[1]		Fine[2]			
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
Indiana								
Fiber products	--	3.30	--	3.30	--	--	--	--
Industrial fuel	0.76	47.52	0.29	16.48	0.47	31.04	0.21	13.53
Domestic fuel	--	1.22	--	.05	--	1.17	--	--
Miscellaneous[3]	--	2.50	--	1.24	--	1.26	--	1.68
Not used[4]	--	.31	--	--	--	.31	--	.21
Total	.76	54.85	.29	21.07	.47	33.78	.21	15.42
Illinois-Iowa-Missouri								
Fiber products	--	1.41	--	1.41	--	--	--	--
Industrial fuel	--	5.30	--	1.63	--	3.67	--	1.70
Domestic fuel	--	1.25	--	1.25	--	--	--	.10
Miscellaneous[3]	--	.04	--	--	--	.04	--	.39
Not used[4]	--	3.18	--	--	--	3.18	--	.97
Total	--	11.18	--	4.29	--	6.89	--	3.16
All States								
Fiber products	--	4.71	--	4.71	--	--	--	--
Industrial fuel	.76	52.82	.29	18.11	.47	34.71	.21	15.23
Domestic fuel	--	2.47	--	1.30	--	1.17	--	.10
Miscellaneous[3]	--	2.54	--	1.24	--	1.30	--	2.07
Not used[4]	--	3.49	--	--	--	3.49	--	1.18
Total	.76	66.03	.29	25.36	.47	40.67	.21	18.58

[1] Suitable for chipping such as veneer cores.

[2] Not suitable for chipping such as veneer clippings.

[3] Livestock bedding, mulch, small dimension, and speciality items.

[4] Includes residue burned as waste.

Blyth, James E.; Smith, W. Brad.
Veneer industry and timber use, North Central Region, 1980. Resour. Bull. NC-76. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station; 1984. 16 p.

Shows 1980 veneer-log production and receipts by species in the Lake States (Michigan, Minnesota, and Wisconsin) and in the Central States (Illinois, Indiana, Iowa, and Missouri). Comparisons are made with similar data collected in 1976. Includes tables showing veneer-log production and receipts (for selected years) since 1946 in the Lake States and since 1956 in the Central States.

KEY WORDS: Imports, exports, veneer mills, wood residue, bark.

40th BIRTHDAY
SMOKEY
1944
1984
PREVENT FOREST FIRES